What is claimed is:

[1] A non-contact three-dimensional measuring method comprising photographing an object with a digital camera from vertically spaced multiple points and determining the length between multiple measured points or the area or volume of a portion surrounded by said multiple measured points based on the position of the multiple measured points on the object in photographed multiple images and the height difference between said multiple photographing points.

[2] The A non-contact three-dimensional measuring method described in claim 1, in which a digital camera is mounted on a pan head at the top of a tripod, an object is photographed with the digital camera from multiple points obtained by vertically moving the pan head, the photographed multiple images and height information of the multiple photographing points are input to a computer, and the computer performs computation by clicking the multiple measured points on the object in one of said multiple images shown on a display attached to the computer.

[3] A non-contact three-dimensional measuring apparatus comprising a digital camera to take photographs of an object, a device to vertically move and fasten said camera at desired photographing points, a computer to determine the length between multiple measured points on the object or the area or volume of a portion thereof surrounded by said measured points based on the level information of said multiple photographing points and multiple photographed images, and a display attached to said computer for displaying said images and instructing the start of computation by clicking said measured points.

[4] The non-contact three-dimensional measuring apparatus described in claim 3, in which the device to vertically move and fasten the camera comprises a tripod and a vertically movable pan head.